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VI

THE INTELLECTUAL ELEMENT IN MUSIC

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I

THIS paper approaches musical experience from one, and that an often neglected side. It is concerned, not with an account of all the more essential factors in musical appreciation in their due relation to each other, but rather with the function of relations in the appreciative process, with its conceptual or universal aspects. While the nature of music as an art will not be forgotten, it is hoped to elucidate this from a particular point of view. Accordingly our thesis will accent musical thought rather than musical feeling. This may explain the apparent one-sidedness and intellectualism of the view that is to be developed.

It is proposed to take thought in the broad sense of the mind's apprehension of meaning and relations, whether or no this is found in a developed and highly complicated and abstract form. This certainly is the germ of thought. It is presupposed that all cognition involves thinking, and that the cognitive aspect of a concrete process of appreciation is of æsthetic importance; *i. e.* that thought has a function in music. One may distinguish between the logic of philosophic and scientific procedure as formulated in the text-books on deduction and induction, the logic of practical life found in various degrees of perfection from crude purposive thinking up, and the logic of æsthetic experience. At the same time, these have a common

ground, and a part of our aim will be to point out their essential similarity.

The logical function of musical ideas is to control musical experience, to secure appropriate reactions and realizations. The method of the readjustment of the parts within the whole process through the instrumentality of the universal is logical so far as it is adequate; it becomes illogical, but not alogical, through its failure. The logic of the experience is its universality, its adherence to musical law, its adequacy. Thus the rationale of appreciation is the doctrine of its immanent logic. Premising the pragmatic view of the function of knowledge, one may rightly speak thus of the logic of music, as of that of any concrete process of experience.<sup>1</sup>

Musical thought exhibits different stages of development ranging from sensuous feeling to inference. The affectively toned related sensation may function as a sign of meanings determined in previous experience. In listening, the perceptual phase of thought is always present. Concrete imagination in terms of auditory and other imagery often plays a part, but thought may take a more abstract form. The inner connections of the music may be attentively observed, or the process may be one of systematic association based on previous thought,—a process still purposive even if lacking conscious control. But whatever the structural form, the universal aspect of the process is of prime functional importance. As every relationship within or between melody, rhythm, and harmony has such a universal character, then attention to these relations, whatever they be, is thought activity, and it is judgmental in function.

<sup>1</sup> Cf. Dewey, *Studies in Logical Theory*, p. 19. I am glad to acknowledge also my general indebtedness to Professor Dewey's method and point of view.

A preliminary word is in order regarding the relation between musical appreciation and thinking. Just as logical thought cannot ultimately be divorced from sensation, feeling, and action, so can the converse be maintained: that musical feeling is not divorced from thought. These are terms in a continuity, phases of an organic process. No rigid line can be drawn between philosophic, religious, and æsthetic contemplation, as is evidenced by the imaginative views of Plato and many another poet-metaphysician. Contemplation may be discursive as well as intuitive. If the function of thought is confined to the determination of the relations within the ideal musical world, such disinterested practical play of the mind is certainly æsthetic; it is an attempt more explicitly to realize the ideal completeness of the art object.

Musical value is found neither in mere affective quality nor in mere sensation, nor in mere emotion; these are signs, materials, or summaries of a value greater than they. Musical value is not merely immediate, nor is it constituted and finished once for all. It is rather a process as continual and unceasing as the music; it is progressively determined and in part constituted by intellectual mediation.

Before entering upon our main theme we should notice the contrast between the implied and the explicated aspects of musical thought. Universal relationships and meanings are sometimes assumed or taken for granted as far as their determinate character is concerned; or again they are merely suggested rather than clearly grasped and given explicit statement in the mind. Every one admits the prominence of this suggestive phase of art, especially of music; but its logical import is seldom recognized.

Two chief functions of the implications of musical thought may be distinguished, retrospective and prospec-

tive reference. On the one hand there are assumptions of meanings that were developed and explicitly realized in previous time; on the other there are suggestions of meanings not yet determined by attentive scrutiny. All thought has its familiar and novel aspects, either of which may be in a measure implied, and either such implication may be a means of controlling the development of the other; *i. e.* its enrichment and better accommodation to the total situation.

The last sentence indicates why the implicit element may have logical value. Its ability to control the appreciative process and to realize the meaning of past or future in their connection with the present, is based upon its felt power of substitution. In the emergence of the explicit from the implicit or *vice versa*, the product is significant because it represents portions of the previous process. In thus pointing beyond itself, the implicit has vicarious value and is conceptual in function. So it may serve to develop, define, and refine the æsthetic susceptibility.

The influence of harmony on melody may be cited as an illustration of the logical value of the implicit factor. In many instances, such as the Pilgrims' Chorus from "Tannhäuser" and Schubert's "Am Meer," the thought implications determine for the appreciator the nature of the melody; for this would be very different without his vague feeling of its harmonic setting, whether this accompaniment is a part of the actual presentation or only tends to an imaginative revival. If a melody has been learned first without the accompaniment designed for it, the latter may be found objectionable. One may resent its determinations as making changes that, according to one's previous conception of the melody, ought not to be permitted in its intrinsic relations. Such was the history

of the writer's acquaintance with Jensen's "Lehn' deine Wang'." In such a case the introduction of the harmony causes a psychical disturbance whose logical import is the tendency to remodel either the objective composition as regards its harmony or the subjective appreciation of its melodic meaning.

## II

Musical concepts are general ideas or notions that spring from the concrete experience of music, are gradually systematized in musical theory, and thus become a source of further deductions in the intellectual world as well as instruments of practical guidance in musical activity. A variety of examples will now be described and classified, for this seems to be the most illuminating approach to the subject. The examples will be given without observing any special distinction between the more explicit and the less consciously developed concepts. It is not contended that they are all clearly present in the ordinary musical experience. But assuming their compatibility, when thus developed, with musical activity, they deserve notice under the general caption of concepts.

Music has three aspects, three sources of value, known as material, form, and expression, and in different degrees these are conditions of our reacting toward stimulation as musical. The primary logical division is that between the musical and the non-musical world. So tone as opposed to noise; organic combination in accordance with musical law as contrasted with either the isolated element or mere incoherent juxtaposition; vitality, soul, and associative value (whether personal or objective) as opposed to mechanical deadness or emotional indifference,—these three are among the most general musical concepts. The inner constitution of each one involves more than the

mere abstract common element ; each involves a tendency to differentiation ; the concept of form implies types of form and details of musical law ; that of expression implies modes of expression, etc. This remark holds good through the whole list of concepts that are to be noticed, which, by the way, fall mainly under the category of form or structure.

A highly systematic concept is exemplified by the musical scale. In this notion, abstraction is made from rhythm and all other features of concrete music save melody and harmony, so as to effect an arrangement in serial order of all those relative pitches which are available as musical material. The use of this concept according to musical laws reveals its nature, which is further specified in part through the three important notions of distance, direction, and melodic relation or affinity. These are all relational concepts ; but in its higher development and taken psychologically, distance is a quantitative determination of relation, while in direction and affinity relation remains a simple quality.

Any tone in a melody, as regards its mere pitch, then, is conceived as part of this complex system and as having a locus determined by it. For first, it has a place in the ascending-descending series, separated by a definite interval from other known tones. And second, it has a recognized and distinct affinity for one or other of these tones. Here its relation to the tonic is the most important conceptual feature of the system. In any phase of musical activity, whether composition, performance, or appreciation, the use of the scale concept consists in its enabling one to pass in an orderly fashion, involving on the whole a minimum of groping and of friction (so far as is consistent with realizing the various particular logical moments involved in musical and æsthetic activity), from

any one point to another in the series. Of course some friction is present in all readaptation, and is at the basis of all æsthetic consciousness and particularly of those logical meanings so essential in musical structure. The nature of the "orderly fashion" of transitions is determined by the subordinate concepts, distance, direction, and relation, under the control of higher æsthetic laws.

While the locus of a tone is definite, this is not conceived as a mathematical point in a line, but as a place of possible variation between limits almost indistinguishable. Within such limits, points are taken as equivalent. The scale in its essential features as just described is indifferent also to absolute pitch; all that the concept requires is a systematic adjustment of part to part within the whole. Therefore we speak of one and the same melody as being sung in different pitches, since the systematic relationships are the same in the two cases. But when such a recurrence of the melody is within one musical whole, the concept of modulation or of a dependent melody must be introduced to signify that we have two equivalent systems of relations focused about different points which are themselves related. This is like a play within a play, or a dream that one is dreaming. The concept of variation within limits is for application systematized in the scale of equal temperament, and this it is that makes possible a recognition of the melody's broader external relationships, and permits us still within an extended composition to admit the two melodies as identical.

Rhythm is a systematic concept in which the principle of equivalence is important. The musical movement is divided into successive parts, measures or fractions thereof, and each part has vicarious value, being capable of substitution for any other part of the same rhythmic grade. Thus measure is equivalent to measure, or eighth

note to its fellow. Even the stressed tones that mark the rhythm are equivalent to the unstressed, for the accent can be shifted to a novel position, as exhibited in syncope, in which beat and stress are at variance. As the scale is primarily concerned with relative rather than with absolute pitches, so to rhythm the absolute point of stress is of less importance than is the regular recurrence of stress. A melody may or may not begin on the accented beat; and of its various phrases, some may begin one way and some the other. A measure is capable of extended division and subdivision after such manner as to render four eighth notes equivalent to a half note in the rhythmic figure, or *vice versa*. Measure is a proper substitute for measure, whatever its complexity or simplicity, throughout the one melody. Thus the principle of rhythm is the recurrence, according to a regular abstract order, of stimulations or groups of stimulations.

However, rhythm is not identical with tempo, for either may change while the other remains the same; nor does its equivalence amount to mathematical equality, though rhythmic figure has a mathematical as well as a psychological basis. While the numbers indicating rhythmic divisions signify relative durations, the demands of expression interfere with their accurate observance. Every measure or rhythmical unit begins with a beat, a regularly recurrent and significant pulsation, but the bearer of this significance, the mark of the principal rhythmic division, need not always be the same kind of content. Very frequently it is stress on the first tone of the beat, increased intensity of attack. But it may consist in the lengthened relative duration of this first tone at the expense of those directly following it, a just perceptible variation from the equality of the fractional parts of the rhythmic unit. Of course either of these methods occasionally may come into

conflict with expressional devices. The latter one is said to have been used and taught very effectively by the violinist Joachim.

All rhythm both embodies and meets the requisite that the various phases of a process should come at the *right* time. It seems to be the simplest solution of that need become an objective demand. In the broader life of humanity our various modes of measuring time are regulators of activity, important instruments in the process of socializing behavior, which aid (though they do not require) rhythmic and concerted action. In proportion as one's mode of daily life is rhythmic can his habits agree with those of others; he becomes able to eat, work, play, and sleep when others do. So in music, while there is an individual, organic, and æsthetic basis for rhythm, the teleology controlling its early development has been largely social, either because of the connection of song with group work or the dance, or because of the need of a unifying factor in purely musical ensemble performance. Apparently, then, as a quantitative, mathematical concept, its demands would be best satisfied by complete mechanization. As it is indispensable that we live by the clock, should not musical thought and practice be regulated by the metronome?

I believe that life and music are in this respect quite analogous, and that here music may be taken as symbolic of life. An erroneous view of the subject is due wholly to neglect of essential factors, to one-sidedness. The above discussion makes patent the presence in the function of the rhythmic concept of a dialectic between subjective and objective values, between individual and social needs, and between the demands of expression and of form. But the two sets of values or needs must be harmonized, for each value positively involves the other. Music is to a

great extent a social phenomenon, and a performer, in order to make a piece comprehensible to hearers, must not only phrase and accent carefully, but must approach in his rendering the ideal of equality between durations; only thus can the composer and himself express themselves and human life through the music. Regular rates of acceleration or retardation are quite compatible with this, and any other temporal changes that leave one in no doubt as to the relation between stresses; but spasmodic playing is rarely legitimate. The notion of variation within limits applies even more patently here than to pitch. The limits are determined by the relation that must obtain between subjective stresses and objective durations. For these must in all cases correspond. Measured durations are the chief counters by means of which feelings of relative stress can be communicated. Objective stress is another means, but its use is more often interfered with either by the complexity of rhythmic figure or by the demands of expression. The relative durations are then to be regarded as the equivalents of subjective rhythmic feelings, and as the proper substitutes for them. It may be a fact that one with a good time sense often has a poor sense for rhythm, or *vice versa*; but this is not the musical ideal.

The distinction between individual and general concepts should be illustrated. Under the former falls the idea of any particular motive or phrase as this identical self-subsistent whole. Among the constituents of such an idea are certain universal qualities of the object. The functioning of such an idea is seen in memory and recognition, and in a judgment of value about the object. One has a general concept when some aspect of a concrete movement, possibly shared by other movements, is noticed or becomes an important feature in interpretation,

— when, for instance, a melodic or harmonic relation, abstracted from its setting in tone color and rhythm, is taken as a type and identified in various contexts.

Certain concepts are of great importance for guidance, particularly in performance, but also in the other phases of musical activity. Consider how important for interpretation is the constant functioning of the sense for the keynote; the feeling of what the main rhythm is, however disguised (for instance the 2/4 figure), and the relative tempo (*e. g.* an *accelerando* in *allegro*); an idea of the style (as *cantabile* or *pizzicato*), or of the dynamic continuity or change (*e. g.* constant *pianissimo*, or *crescendo* and alternate accents). Notice that among the manifold possible characteristics of musical progression, certain ones are found sometimes together, sometimes separate. This not only makes possible the development of the distinct concepts, but their origin is due to the need that the tendencies and habitual reactions from which they spring should be differentiated and better adapted. Thus the temporal and dynamic changes just mentioned may be quite distinct, and there may be need to resist a tendency to interpret *accelerando* also as *crescendo*. The fact that many aspects of musical movement are indicated in the score by words shows their conceptual nature; for pitch and rhythm are not the whole of music. At the same time it is the least complex, intricate, and intellectual aspects of the music for which these directive words stand; and the comparative absence of words, whether on the score or in the auditor's mind, to express the most essentially structural side of music should not blind one to its intellectual nature any more than the use of signs in algebra.

To the hearer such guiding concepts are none the less of value though words may not arise as their symbols,

though one could not give them a technical explication, and though they may never function save in the presence of positive or negative examples. The activity of one of them (*e. g.* the tonic feeling) not only aids in the apprehension of this special feature of the music, but within certain limits helps the mind grasp the whole movement. Yet it is true that too keen a sense for one feature, like rhythm, may interfere, not perhaps with an easy reaction, but with a discriminative, objectively valid reaction to the complex object. Some of these concepts aid one in storing in mind subtle and not readily describable characteristics of a piece which become important logical factors in one's assessment of its value, though they are not made abstract objects. One may feel the pizzicato accompaniment by the orchestra as having a peculiar fitness, without contrasting it with the absent legato; or a passage may be noticed as an unaccelerated crescendo in that it is noticed as it is in its wholeness.

The description of guiding concepts has more than once suggested and illustrated the last group to be dealt with, that of abstract musical outlines. A concrete musical progression may be viewed as the vital union of different aspects (this does not refer to stages or brief portions) of the movement, which are in themselves not music, and which may, whether in whole or in part, be embodied in other pieces. There are outlines of the first and of the second degree. (1) Principal outlines are illustrated by abstracting any one of the following aspects completely from a musical whole, be it long or short, — melody, harmonic accompaniment, rhythm, tempo, and dynamic features. Each of these is an abstract though fairly particular form. If it be long, it will be proportionately vague and uncertain and, like a long piece of music, capable of thorough comprehension only by its serial expansion.

Such expansion will either reveal the inadequacies of the outline concept or, in case tendencies to error are readily checked, show its perfection. (2) The subordinate outlines are abstractions from the principal ones, and are instanced by the following discriminations: In melody one can abstract a theme out of the body of its variations, and in general can distinguish the essentially structural portion from the ornamental, though where the line should be drawn is often theoretically uncertain. Trills, turns, grace notes, often accidentals, can sometimes be ranked as ornaments. When dependent melodies are incorporated in the melody of the primary tonic, the different melodies thus interwoven can to some extent be discriminated, certainly in study. In harmony, crucial chords and changes can be detected which give special significance to their context. The distinction of the separate melodies in a piece of polyphony by Bach would yield outlines of this order, or of the first; for each outline here is more individual (at least in its union with rhythm) than most of the subordinate outlines. Finally, the main rhythmic outline may be abstracted from its complications, divisions, and details; also differences of rhythm connected with the component melodies of polyphony, as in syncopation when the absolute accents of the parts do not concur, or in case of duple rhythm in one part and triple in another. Such a distinction of rhythm also makes it easier to distinguish the melodic components in polyphony.

It must be admitted that to insist on the constant presence in the hearer's mind of a great variety of such outlines as structural existents would both do violence to the psychological facts and tend to sacrifice the æsthetic for an intellectual attitude to music. The objector puts two questions: (1) Are musical outlines either a fact or a possibility in the auditor as such? and if so, (2) are they

of any utility to appreciation? A single answer, however, will suffice for both questions; since if such phenomena had no valid function within the art, we can be sure they would have no existence there, generally speaking; their usual presence would be a pretty good indication of their usefulness. Now there is no doubt that when one is not in the æsthetic attitude, all the concepts described and many more are possible constructions. Nor is there any doubt that some of these products of intellectual study serve to enrich the subsequent enjoyment of music. Both their importance and the ease of their formation vary, and not always concomitantly. In the more complex and intellectual forms of music, melody may be a more important feature than rhythm, at least it is not inferior to it. But rhythm is more readily treated as an abstract outline than is melody, and for two reasons: melody is employed only in music, while rhythm is embodied in various other activities; and again, melody naturally seeks a rhythmic embodiment. The latter reason implies that all music is rhythmical, and is therefore weakened by the undoubted fact of a class of arrhythmical music, in which either harmony substitutes for rhythm as a unifying factor (as in the chorals of the Middle Ages), or strict musical form is sacrificed to expression (as in the recitative). Dynamic form is an example of a feature somewhat readily abstracted by the hearer. It is true the rhythm is apt to adhere to it, for rhythm tends more than any other feature to interpenetrate the whole movement. Still the dynamic values may be noticeably felt for themselves, since they correspond to typical forms of emotional manifestation and in a sense express spiritual life in the abstract. For the same reason the dynamic outlines as well as the rhythmic are of real æsthetic utility.

When on the one hand a critic denies the value of mu-

sical outlines as well as of the theoretical training that might foster them, and on the other hand insists that musical value is based on structure and therefore that the active attitude, which makes an effort to grasp and master the object, is superior to the passive one, in which the auditor is overwhelmed by the mere stimulation in its quality and mass, — this looks like a contradiction, though its author may regard it as only a difference of stress and of degree. Of the two attitudes, the active involves relatively more intellect, the passive more emotion. But all intellection involves abstraction of some kind and degree; it implies tracing the relations which constitute an object. One's attentive efforts cannot well be concerned with mere feeling; they have to do rather with the structural content of music.

Music is a concrete organic form, of course, and not a mechanical union, effected by the composer, of mere abstractions. It follows that æsthetic pleasure, in the narrow sense, is conditioned by the perception of the unique individual unity. And no doubt this helps explain why one who goes to music for enjoyment fails to notice some abstract likenesses between different pieces which are patent to the curious scrutiny of the student, for their interests differ. It is true that the phases of music are wholly transformed through their artistic union, that the abstract, as such, does not exist in the concrete, and that analysis in this field, as throughout mental life, involves in some sense the destruction of the original unity. But here the real test and criterion of the value of analysis reveals itself. Æsthetic validity belongs to such abstract analysis as tends to produce a new sense of concrete unity and beauty enriched because altered by this very process from a relatively simple unity into a complex totality. The totality, whatever its structure and however ecstatic

its emotion, embodies the significance of previous unities, whether or not these were appreciated æsthetically at the moment of their psychic existence.

In a musical composition of any length, every phrase of independent beauty can be appreciated as it passes. But it is not absolutely independent, and further beauty is revealed when one detects the connecting links between the smaller units. Their significant similarity in melodic movement is often connected with rhythmic differences. Plenty of instances of this kind could be pointed out in modern music. The danger to enjoyment here is not from analysis, for this decidedly helps, but from want of synthesis. There is no appreciation of music whatever that does not alter the given beauty and transform the stimulus. Even the unity of the brief phrase is not merely given but in part constructed by the auditor; and in relation to this phrase the æsthetic moment *par excellence*, the emotional sense of its unity and meaning, is not in its appearance strictly concomitant with the developing objective unity. This means that even within these narrow limits of duration the mind must do some work without immediate returns. And how much more is this true in proportion as the unity is long and complex! To suppose that every instant of this development must be characterized by heightened emotion is absurd, and to deny that those more intellectual instants, when the mind is scrutinizing and meeting a problem, are an essential portion of the æsthetic attitude as a process, seems arbitrary.

By way of caution it should be added that the question regarding outlines is not only whether their content is a set of images filling out a particular melodic, rhythmic, or dynamic form, but also whether such outlines function as controlling factors and often as conscious checks, whether their meaning is embodied in more or less con-

scious habits. Cases of conflicting or divergent association are best explained by recognizing such habit units in the total complex. When two phrases are identical in all respects save dynamic quality, the first being forte and the second diminuendo, the tendency is to make the second an exact repetition of the first as long as the habits are not differentiated, and this may depend on observing certain differences in context which make a demand for dynamic change. The fault is readily corrected when the dynamic outline (always in some of its connections, part of which are relevant and part irrelevant) is given sufficient attention and so readapted.

Both the importance and the possibility of outlines is exhibited by a common and useful method of teaching music to children, according to which the pupils are to study the verses, rhythm, and melody of a new song separately. They swing or beat out the rhythm or embody it in monotone. The melody is studied by reading and practicing the various intervals and transitions therein involved with frequent explicit reference to the scale. It may surprise some to find how much of the spirit of æsthetic or artistic joy children can bring to such exercises, but this need not be insisted upon as a condition of the value of their abstraction. In giving attention to each feature separately, qualitative concepts are developed. Thus habits are formed without clashing, which in maturer experience function largely without being consciously distinguished; yet their constant recombination implies the universal.

In the mode of formation of musical concepts two extremes may be remarked: (1) (*a*) When most explicit there is a comparison of different cases and abstraction of their common element. The data are really certain habits of reaction raised into consciousness by the stim-

ulus of some need, and the result is not only a new or a modified concept, but a judgment. (b) A variant mode is when there is an attentive scrutiny of one case and abstraction of its interesting feature, which is later discovered in or applied to other cases. (2) At the other extreme, differentiation and assimilation on the plane of habit account for the growth of a conceptual function. But not only may this come into clear consciousness at a later stage (the apparent beginning of the concept in (b)), but a slight conscious guidance must be assumed at the time of each adjustment in the process of development.

Similarly, the mode in which these concepts function varies between two limits: unconscious habit, or the maximum of adaptedness, and purely theoretical abstract judgment, representing the maximum felt need of readaptation and systematic attempt to that end. Neither extreme has much of any place in appreciation, but there is a nearer approach to the habit side. The conceptual function is stimulated by musical examples; and when there is clear conception at the time of listening it is usually due to some structural device that attracts the attention from its familiarity or novelty or difficulty, for the familiar or reiterated may readily provoke the question *why*. Thus the occurrence of the scale form as a melodic motive, the repeated indication of the keynote (or sometimes its concealment by strange transitions), and some striking alteration of the rhythmic figure may serve as stimuli. Indeed various emotional interests may help attract conceptual attention to structure.

### III

In this section certain phases of musical conception that have already been suggested must be discussed. The following closely related questions will require attention:

(1) What is the place of imagery, and (2) what the place of feeling and habit in musical conception? (3) Are these concepts concrete or abstract? and (4) qualitative or quantitative? (5) What is the difference between thinking *in* and thinking *about* music? and (6) is musical thought to be characterized as immediate or mediate?

1. A study, impossible in this article, of the psychological and logical problems of correct intonation would show that the significance and the actual content of a tone are not always in precise agreement; that a correct image need not be substituted for a false pitch in order that its musical connections be duly appreciated; and that one and the same content may in some cases have two different meanings that are both valid, a case somewhat analogous to the figure of speech or the pun. Yet obviously there is a limit to this possible discrepancy between structure and function. Again, it was pointed out above that the functioning of guiding concepts and of musical outlines and the process of recognition through these and other concepts do not demand the presence of a tonal image or series of images. For instance, it is said that a given melody may *have* a primary tonic though such a tonic is not found as one of the actual series of presented pitches; for in this case the tones that are presented invoke the musical imagination, working according to the laws of musical structure, to supply the missing tonic. If this means a demand, not to correct the intonation of the tone which purports to stand for the tonic, but to fill out through imagination a scale position unoccupied during the progress of the melody, it is doubtful whether actual music demands this of the listener. In other words, it is doubtful whether any melody which is felt as complete, unitary, and beautiful essentially depends upon and implies a fundamental tone that pretends to no

place in its structure. But if the proposed theory be admitted, it is then unnecessary to posit the existence of atonic melodies whose adequate musical meaning does not depend upon the reference of all its tones to one and the same fundamental.<sup>1</sup> No decision of this question is here offered. But we would suggest that if a melody has a tonic, whether actually given or only implied in its structure, the appreciation of the tonic's value at any time does not depend upon the presence of any vivid auditory image of it.

A recent experimental study on tonal images and judgments has some bearing upon our musical problem.<sup>2</sup> A few conclusions of this research may here be cited: (*a*) The auditory image is but a part of the memory image of tone; it is supplemented by images from other modalities. (*b*) The auditory image wanes after two seconds and may be gone at sixty seconds. (*c*) The supplementary images may aid as identifying marks when the auditory core has disappeared. Judgments of identity or difference between pitches may thus (*d*) be independent of the presence of any auditory image, or (*e*) be aided by an unnoticed auditory image, as in assimilative recognition; or (*f*) be quite dependent upon a clear auditory image. "The deliberate use of the image as a standard of comparison is a more complicated device, a roundabout path indicative of obstacles, uncertainty, and hesitancy," and its results are comparatively uncertain.

It should be remarked that in such experiments as yield these conclusions the conditions are made very simple, while in musical experience they are very complex; that much finer sensory discriminations are called

<sup>1</sup> Meyer asserts the existence of such atonic melody. Cf. his *Contributions to a Psychological Theory of Music*.

<sup>2</sup> Cf. Whipple, in *American Journal of Psychology*, vols. xii, xiii.

for in the experiments than in ordinary musical experience; and that the purpose of the experiments is to examine and test an intellectual function, while musical thought aims at a higher realization of æsthetic values. Thus the two cases are not quite parallel. Thought having immediate value function is more apt to employ imagery, other conditions being equal. The constant presentation of new auditory sensations in music tends to strengthen and prolong the life of those images, such as the tonic, which have the most intimate and numerous connections with the new material; while in the competition other images, in proportion as their meaning is subordinate in the melody, are driven from the field. This remark applies rather to single images than to series or groups, for the conscious significance either of a phrase or of a melodic outline may be great though its foundation in imagery is very apt to be absent. On the same principle climactic tones and tones important as transition points tend to be strengthened, within certain limits, as images.

Conclusion (*f*) above shows that in music images are more prominent when one's attitude is questioning, when values are not well ascertained. In proportion as certain connections of pitch are familiar and no difficulty is felt about them, clear images would drop out. Even here, however, it should be remembered that the attitude of the musician (value-searching and finding) tends to sift out his imagery and to strengthen much of it because it is a sign of value; *i. e.* musical habituation may involve a deepening of the value-searching consciousness and a strengthening of overt memory, and not a mere elimination of images.

The need of auditory imagery when musical thought is especially problematic is exemplified in one's early attempt fully to appreciate a harmonized melody from the

score without rendering it on an instrument. Whether one hums, whistles, or sings the air, or attempts a quite silent reading, there is a demand for the simultaneous imagery of two or more tones. At one stage of practice, at least, the musical values are not realized through visual attention to the notation, however active thought may be in tracing relationships. One must hear with the mental ear the entire musical structure. As this feat, even in case of the simplest harmonies, may be at first a difficult one, a keen activity of other senses, visual and kinæsthetic, may be called forth as associative supports of auditory imagery; and appeal may be made to the device of a rapid succession of tones as a substitute for their strict simultaneity, until by the aid of incipient movements of execution the right auditory imagery may be aroused and established. As time goes on, some of the motor and kinæsthetic elements may be eliminated, until auditory images are more directly excited by the visual stimuli. Whether for some temperaments and at a later stage of maturity musical satisfaction might be independent of any immediate auditory content, either of sensation or of image, cannot be positively asserted; but it is conceivable that the visual symbols might arouse such a rich intellectual content (the insight into musical structure) as to awaken the æsthetic sense of value.

It is no doubt true<sup>1</sup> that, other things being equal, the intensity of emotion decreases as percepts and images give place to abstract concepts. But this does not deny that a steady interest and a quiet sentiment may attend the less imaginative type of thinking which, because of the keenness of abstract insight, may at intervals be reinforced by strong emotional thrills. Nor can it be denied that this type of feeling may be æsthetic.

<sup>1</sup> Cf. Ribot, *Psychology of the Emotions*, English translation, p. 317.

2. Enough has been said above under the topics of the formation and functioning of concepts and the conditions under which musical imagery is employed to show that the habit aspect of thought is prominent in music. Indeed, every concept is an expression of habit or its readjustment, while every habit embodies the value of a concept. It must not be supposed that habit means always the elimination of high types of consciousness. There are habits of feeling or thinking as well as of movement. A concept is a complex affair, having its novel and its familiar aspects; and it may at once occupy part of one's attentive interest and extend its roots down into the depths of that marginal region dominated by subconscious habit. In listening to music the attention is not occupied solely by auditory sensations; it is their *combination* that is striking for its novelty, its strangeness, its beauty, its exemplification of this or that principle or meaning. This combination is an objectified and individualized concept, and its appreciation involves the conceptional function; that is, the adaptation of a habit to a particular case. The combination is not a mere physical datum, but is dependent on organic and mental conditions. Even when long familiarity has shaped one's reaction to it into a specific habit, it is, as it were, a physiological assumption which remains to be tested by each new case; and the feeling of the test is a conceptual feeling, as is also the resulting satisfaction.

That which functions conceptually in appreciation is thus a habit, an apperceptive mass, a subjective generic form correspondent to the form of combination objectified in the music. This form or habit may be structurally composed, in part at least, of (*a*) musical imagery, auditory, kinæsthetic, or visual; (*b*) extra-musical ideas, verbal or concrete; (*c*) feeling or emotion, including pleasure, pain,

and feelings of tendency or activity; or (*d*) as activity it may be the subconscious aspect of the appreciative process and so far forth structurally indescribable.

It has been shown above that the concept may involve a feeling of tendency in a certain direction, a feeling of the limit of such musical movement, and a feeling of possible variation within limits. The relation of a pitch to the tonic, the shake, and all variation from correct intonation may be examples. When there is a feeling of tendency its direction need not be abstractly defined as up or down, toward or away from, increase of complexity or resolution into simpler harmony, in order that it be a concept; the nature of the strain sensations and other feelings constituting it may suffice to differentiate it and render it more than a mere vague, meaningless feeling. So, too, its limits need not be imaged in advance; if felt at the right moment as either resting-points or counter tendencies, the concept is thus defined.

3. The distinction was above made between the individual concept, as of this unique melody, and the universal concept, exemplified when some genetic feature or outline is abstracted from the total musical movement. But the distinction that now concerns us is that between a narrower and a broader view of the very nature of music. The one would regard musical appreciation as an isolated activity of the mind whose sole content and meaning consists in tones and their relations; the other views it as continuous with human life at large and in significant connection therewith. So two contrasting theories are found in musical æsthetics: (*a*) that of the intellectual formalist and (*b*) that of the idealist or symbolist. For the latter, music has extra-musical values and expressive powers. Tones in their structural relationships have vicarious value; they stand for spiritual relationships. But

these are of a general and abstract kind, and therefore not readily or adequately to be stated in linguistic terms. From this point of view music is the pure form of our inner life. This bare form is objectified in tonal material and thus given an artistic value. But as appreciated it is apperceived by subjective forms in the hearer's mental make-up, forms which, as compared with the objective forms, may have a different concrete filling of visual and other imagery and a broader meaning. Auditory sensations are but a fraction of the richness of our inner life; yet, when combined according to the universal laws of the mind, they function as substitutes or symbols and serve to arouse further mental content.

“To think concretely is to represent general relations as embodied in particular instances;”<sup>1</sup> or in a related sense, it is to think reality or real objects in their wholeness, and not sacrifice this to some one or more important aspects.

*a.* Now for the musical formalist the standard of concreteness is the whole unique piece of music viewed as a complex of tones in various relations. Judged by this criterion, he thinks abstractly in proportion as his attention isolates some one feature like the rhythm, which may also have a universal character. But since, whether as performer or listener, he will in the main regard this feature as embodied in the given instance, since tone still remains the substance and material of his thought, it is to that extent concrete.

*b.* For the symbolist, on the other hand, the standard of concreteness is found in human experience at large or the nature of spirit. The structure of music embodies universal relations that obtain through all experience. Under this test musical thought is concrete only in case

<sup>1</sup> Baldwin's *Dictionary of Philosophy*, article “Concrete.”

of a complete fusion of the subjective mood and imagery with the objectively given movement, only when the presentation has as its subjective aspect an insight into and feeling for the richness of life. But the presentation may be distinguished as a system of signs, a language which stands primarily for a system of abstract relations. In the more introspective and reflective hearing of music, then, one may devote attention to this language and its abstract meaning; or, on the other hand, the mind may be given up to the mere subjective play of feeling and imagery, abandoning all notice of the musical movement and structure. In both the latter cases thought is abstract according to the standard of the idealist.

4. In order further to determine the nature of musical concepts, a distinction should be drawn between (*a*) popular, (*b*) scientific, and (*c*) æsthetic concepts, which may reveal also the relative place of qualitative and quantitative determinations in musical thought.

*a.* The popular concept is above all practical; it has reference to the action of one's self or others or to those phenomena in the world which manifestly affect us; it is thus often embodied in plan or purpose. At the same time, it may be so related to individual satisfaction as to have an æsthetic as well as a moral value. Among its constituents are images, qualitative relations, feelings, and value attitudes, so far as these serve to mediate the appropriate reactions; but these become gradually supplemented by ideas of quantitative relations. It exhibits different stages of development. For instance, in the popular concept of the color red, the experience or object is at first relatively unanalyzed. Red is a unique quality, though regarded as one of the class color. It is itself a class idea, denoting any of the various shades or tints of red; and each of these is a unique quality, though all together are

capable of a serial arrangement in which indefinite ideas of more and less early play a part. At a higher stage there is a more definite determination of the serial order as quantitative by reference to a standard series of objective color tones as a pattern. The number of members in such a series may be arbitrary, but by reference to it any new instance of red would receive a numerical status. There may further develop a quantitative concept of the causes and relations of any specific qualitative effect, by reference either to the mode of mixing paints, etc., or to the extent of red space which will have a desired effect. While through such means the general concept gains in specification, yet in itself red is still taken as a unique quality.

*b.* The scientific concept functions immediately to enable the intellect to classify and explain the fact, *e. g.* red, in the most universal manner, to grasp it along with other facts in the most comprehensive and unitary system. Its ultimate function, however, is to make possible a more adequate control of the reactions of humanity to the phenomenon ; *i. e.* it is the function of the popular concept perfected. Nor is the distinction between the scientific and the practical attitudes or methods rigid. Already in the latter we have seen a growing analysis of the crude whole of experience into aspects, and therefore some abstraction from the immediate felt value of the total. Such analysis and abstraction are in the scientific concept more extreme and disinterested, yet while the effort is made to keep personal bias and feeling out of its structure, it tacitly assumes its adaptation to the essential needs of humanity. Such a theoretical notion shows the common ground of red and other colors and finally other kinds of quality, such as sound, in reducing their differences to quantitative, measurable differences in a mode of motion.

It thus substitutes a formula for a set of images and feelings. But all qualities and values are not eliminated from the formula. For both the ultimate units assumed in the scientific account and their orderly relation or unity are qualitative. While their relations have become measurable, such measuring means a checking of one qualitative experience by another taken as a standard. Indeed the aim of the abstraction is in part a more adequate valuation and feeling. So the scientific definition of the predicate (as red) will in the end be able to contribute to and determine the value of the subject (red objects in human experience).

c. The function of the æsthetic concept in its primary forms is to secure an immediate satisfaction; it involves a minimum of the feeling of tension with law or standard. In its later developments this felt tension may be a factor, when the concept's function is to comprehend, secure, and enrich an effect which without the aid of more elaborate concepts would escape appreciation. In other words, it comes to aim at the maximum of possible value which is in part determined by a complex standard and laws. The æsthetic is rooted in the popular concept. Its notion of red, for example, is at first that of a unique and pleasing qualitative experience. Red effects are correlated with other color effects and partially differentiated from them as warm or stimulating colors. The higher development of the æsthetic feeling for relation (including contrast, harmony, and discord) involves a keener discrimination of values and a more idealized feeling of the value of red. Red is no longer so isolated as an experience, but it is felt, imaged, or thought as belonging in certain typical connections and as *not* belonging in others. The experience is largely qualitative, and involves a sense of wholeness, red being one, though the chief, feature in this whole.

This notion is still further specified through the supplement first of quantitative ideas of how the effect is physically obtainable (compare the later stage of the popular concept), and then of æsthetic laws both broader and more precise which reveal the grounds of the effect on the one hand and the criteria of value on the other.

The notion of red has been instanced because in its different degrees of completeness it may have chiefly practical, artistic, æsthetic, or theoretic functions. It is easy to substitute a musical example, but this need not be here worked out save for the higher æsthetic concept. The trained musician will have such a complex, relational concept of the leading note, for instance. Though this be sensed or imaged, it is felt in its proper relations. It is no mere synthesis either of apprehension or of perception, to adopt Lotze's distinctions.<sup>1</sup> That is, it is not merely lumped together with other tonal values in one vague consciousness, nor is its place in the movement or series one of mere succession; its relations are not exhausted in the before-and-after relation. Rather are its relations appreciated as based on certain grounds (the structure of the scale, the laws of melody and harmony, etc.), whether these be thought abstractly or not. *Therefore* the tone is felt as leading tone; as such predicate it gains a definite import in the form, and the hearer has discovered a partial rationale of the effect. Such an attempt in musical experience to grasp the effectiveness, to trace it to its cause, and so to control its realization, though still retaining imagery and feeling, exhibits its similarity to scientific conception, and indeed depends indirectly upon that for its success.

For though the popular, scientific, and higher æsthetic concepts are distinguishable, they are bound together in

<sup>1</sup> Cf. *Logic*, English translation, vol. i, p. 38.

the *total* musical experience of the race. Æsthetic concepts often do not rise above common-sense methods, only (as in music) they have regard to appreciation rather than to conduct or phenomena in the every-day world, and thus they idealize their material, making out of it a unique self-articulated tone world. The concepts of the performing artist would exhibit further similarities to the concepts that function in ordinary practice on account of their common relation to doing. Further, the most technical and scientific concepts ultimately react into appreciation for its advancement, though not necessarily in the individual life. For musical æsthetics is distinct from mathematical physics, though the latter may supplement the former. So far as the exact ratios of rhythmic measures, sound vibrations, overtones, etc., do not enter into the musical consciousness, they are not directly concepts of musical æsthetics. But even such technical mathematical concepts may conceivably have a value in training one to a more discriminating appreciation and performance. For if mathematics, physics, and physiology have any power to modify or supplement psychological law and thus musical æsthetics, then through this intermediation they may and ought to affect one's attitude to music. It may be that only by an appeal to mathematics can a clear and adequate insight into musical structure be gained, and yield laws that shall exhibit the significance of our actual musical experience. If that be the case, then mathematics is a means of gaining musical control. But neither composer, performer, nor hearer will have in mind such mathematical determinations; these are re-translated into relations of quality or psychological quantity (such as measurable distance in the scale), for in music itself one is never directly concerned with physical quantity (such as vibration rates).

Thus in most of the directly æsthetic and artistic activity and even in much musical practice, the requisite is emotional thought, vital interest, imaginative sympathy, soul; therefore the more popular and æsthetic concepts. But there is a sphere of activity for the more quantitative and scientific mode of conception also in the systematic study of musicians, in the development of musical tradition and systems, and in the invention and perfection of instruments and technique. Nor can it be doubted that all this reacts ultimately and with power into the inner musical life of man.

5. A distinction should be made between thinking *in* music and thinking *about* music, but this will require little elaboration after the foregoing paragraphs. Universal meanings characterize each type of thought. In the former these meanings are embodied in auditory, kinæsthetic, and other sensations or imagery having direct material value in the musical experience; in the latter they are suggested by verbal, numerical, or other symbolic terms, — symbols which have no such direct value, but are external to the actual musical activity. Thus the former thought mode is largely concrete and is strictly a part of the æsthetic process, while the latter is more abstract and intellectual in its nature. But though their distinction is readily formulated in theory, in practice a sharp line cannot always be drawn between them. Thus, in different degrees, any one of the symbols 2-3, tonic-dominant, C-G, and their staff representation, may, as a mode of thought, shade over into or be fused with the feeling of actual relationship between two tonal impressions or images.

Recurring to the feeling of tendency explained in (2) above, it is not *essential* to the constitution or functioning of thought *in* music that this feeling be defined as

regards either its direction (*e. g.* *accelerando*, up in pitch, away from discord) or its limits (in image or idea). Such definition *may* be a phase of thought *in* music, or again it may belong wholly to the sphere of thought *about* music. The structure of the former may consist mainly in the peculiar quality of the strain sensations and the feeling of check to or satisfaction of the tendency: these may be sufficient to define respectively the tendency and its limit. In thus far the thought appears fundamentally qualitative in its nature. Such thought is present in the actual sensuous embodiment of these feelings as one performs or listens.

6. The question about the immediate or mediate nature of musical thought may well be presented by considering Gurney's views on musical form and our appreciation of it, with special reference to the distinction between briefer and longer musical movements.<sup>1</sup> His ideas are in substance as follows: The real beauty of music is embodied in the shorter unit of movement, such as a melodic phrase. This, the essence of music, is appreciated by a separate musical faculty, which is out of all relation to the intellect. The various relations (such as likeness, difference, contrast, balance) between phrases *may* be cognized intellectually; but the phrases, which are unique and individual, are of most importance musically. Plan or conscious design can be attributed only to the more comprehensive unities. The individual part fulfills no plan and is inspired by no end. The formal connection between phrases may be more or less cogent and organic, it may involve rational principles; therefore the corresponding subjective attitude may involve the exercise of thought. But the beauty of the single phrase is wholly individual and inexplicable, and is apprehended by the

<sup>1</sup> *Power of Sound*, pp. 190-206 *et passim*.

unaided intuition. The listener's mental process is here that of immediate apprehension, while there it includes reflective or mediate thought.

But because the essence of beauty is revealed through the former, it appears that intellectual processes, whether of analysis or synthesis, have no æsthetic validity. If the interconnections between phrases or the more inclusive forms have any effectiveness or worth in themselves and so contribute at all to the sum total of beauty (for from this standpoint there is in an extended piece only an aggregation of successively appearing beauties and not a complex beauty of the whole), such value resides wholly in their immediate, individual aspect; it is merely given to this mystical musical faculty and in no wise determined by thought, which is concerned with universals and works under the guidance of rational principles. In no case does appreciation employ non-musical categories. Regularity of tempo and rhythm, fixity of pitch, and other factors of musical form have an immediate instinctive value rather than a reflective one. Musical synthesis does not involve intellect or culture: "And so far, in these all-essential and characteristic forms, the general intellectual faculties, whether imaginative or logical, seem to have no place at all: the unique faculty of coördinating the notes and perceiving the group as a whole may be possessed by the most dunderheaded boor."

These views certainly involve a partial truth, but this is present only by implication and is either neglected or rejected by Gurney in the main. Yet the pressure of its demands is such as to force him, in the further description of his position, to statements really incompatible with the dualistic theory of thought and intuition just outlined. For first, as to the subjective side, it appears that the musical unit cannot be merely given. In proportion as

he really appreciates, the listener is mentally active rather than overpowered by his object. His attitude can hardly be called one of *simple* apprehension, for his mental content is a complex unity. Though *known* relations have no place in his sense of beauty, the importance is admitted of *felt* relations based on associations due to past experience. Evidently if the development of musical intuition depends on experience, the utility of the experience will depend to some extent on the part played in it by cognitive aspects. The intuition is an act of synthesis, a *grouping*, *coördinating*, *phrasing*; and as its content includes distinguished terms and felt relations, this implies an act of analysis. As regards the objective side, it is maintained that musical form is organic and involves strict interdependence of parts, that form is present in proportion as the sequence and mode of connection is cogent, and that therefore the notion of form is more applicable to the smaller than to the larger unities. However individual and transcendent of entire comprehension or explanation a form may be, then, it cannot be regarded as merely particular, as exclusive of all universal characteristics. As individual form, it is the unity of particular and universal.

The inference from such views on musical form, regarded either as the subjective attitude or as the object, is that form is not a simple datum, for that would be the mere material of appreciation, but a complex process. Apprehension is complex, even in its structure, and patently so in its function and meaning. It has its immediate and mediate aspects which are never entirely divorced. If the unity, meaning, and beauty of a phrase be summarized in a thrill of feeling and heightened pleasure, this is not mere pleasure nor mere immediate feeling, nor is it the whole of appreciation. Were that the case, all musical values would be alike to one, or rather the

very possibility of their comparison and adjustment to a standard would be impossible. This feeling is an abstraction as compared with the real process of appreciating, and it is but a sign or a portion of the value that has been worked out in part by the intellect. The feeling as immediate is rooted in and organically continuous with mediating processes preceding it, and its meaning should not be sacrificed to its bare content. To divorce them is not only to be untrue to the essential nature of the process, but to plunge one into insuperable theoretical difficulties. The two sorts of musical unity, that within the phrase and that between phrases, are *not* different in kind, therefore, but only in degree; just as apprehension and reflection are not distinct faculties or modes of mental activity, but both involve, though in different degrees, the two factors of mediation and immediate feeling.



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